

# SCIENCE

Published by the **American Association for the Advancement of Science (AAAS)**, *Science* serves its readers as a forum for the presentation and discussion of important issues related to the advancement of science, including the presentation of minority or conflicting points of view, rather than by publishing only material on which a consensus has been reached. Accordingly, all articles published in *Science*—including editorials, news and comment, and book reviews—are signed and reflect the individual views of the authors and not official points of view adopted by the AAAS or the institutions with which the authors are affiliated.

The American Association for the Advancement of Science was founded in 1848 and incorporated in 1874. Its objectives are to further the work of scientists, to facilitate cooperation among them, to foster scientific freedom and responsibility, to improve the effectiveness of science in the promotion of human welfare, to advance education in science, and to increase public understanding and appreciation of the importance and promise of the methods of science in human progress.

#### Membership/Circulation

**Director:** Michael Spinella  
**Deputy Director:** Marlene Zendell  
**Member Services:** Rebecca Dickerson, *Manager*; Mary Curry, *Supervisor*; Pat Butler, Helen Williams, Laurie Baker, *Representatives*  
**Marketing:** Dee Valencia, *Manager*; Jane Pennington, *Europe Manager*; Hilary Baar, *Associate*; Angela Mumeka, *Coordinator*  
**Research:** Renuka Chander, *Manager*  
**Business and Finance:** Jacquelyn Roberts, *Manager*; Robert Smariga, *Assistant Manager*  
**Administrative Assistant:** Nina Araujo de Kobes  
**Science Member Services**  
Marion, Ohio: 800-347-6969;  
Washington, DC: 202-326-6417  
**Other AAAS Programs:** 202-326-6400

#### Advertising and Finance

**Associate Publisher:** Beth Rosner  
**Advertising Sales Manager:** Susan A. Meredith  
**Recruitment Advertising Manager:** Janis Crowley  
**Advertising Business Manager:** Deborah Rivera-Wienhold  
**Finance:** Randy Yi, *Senior Analyst*; Shawn Williams, *Analyst*  
**Marketing:** John Meyers, *Manager*; Allison Pritchard, *Associate*  
**Traffic Manager:** Tina Turano  
**Recruitment:** Terri Seiter, *Assistant Manager*; Debbie Cummings, Celeste Wakefield, Rachael Wilson, *Sales*  
**Reprints Manager:** Corrine Harris  
**Permissions Manager:** Arlene Ennis  
**Sales Associate:** Carol Maddox

#### PRODUCT ADVERTISING SALES: East Coast/E.

**Canada:** Richard Teeling, 201-904-9774, FAX 201-904-9701 • **Midwest/Southeast:** Elizabeth Mosko, 312-665-1150, FAX 312-665-2129 • **West Coast/W. Canada:** Neil Boylan, 415-673-9265, FAX 415-673-9267 • **UK, Scandinavia, France, Italy, Belgium, Netherlands:** Andrew Davies, (44) 457-838-519, FAX (44) 457-838-898 • **Germany/Switzerland/Austria:** Tracey Peers, (44) 270-760-108, FAX (44) 270-759-597 • **Japan:** Mashy Yoshikawa, (3) 3235-5961, FAX (3) 3235-5852

**RECRUITMENT ADVERTISING SALES: US:** 202-326-6555, FAX 202-682-0816 • **Europe:** Gordon Clark, (44) 81539-5211, FAX (44) 0223-302068 • **Australia/New Zealand:** Keith Sandell, (61) 02-922-2977, FAX (61) 02-922-1100

Send materials to *Science* Advertising, 1333 H Street, NW, Washington, DC 20005.

**Information for Contributors** appears on pages 37–39 of the 7 January 1994 issue. Editorial correspondence, including requests for permission to reprint and reprint orders, should be sent to 1333 H Street, NW, Washington, DC 20005.

**Internet addresses:** science\_editors@aaas.org (for general editorial queries); science\_letters@aaas.org (for letters to the editor); science\_reviews@aaas.org (for returning manuscript reviews); membership@aaas.org (for member services); science\_classifieds@aaas.org (for submitting classified advertisements)

# LETTERS

## Tagging "Infiltrators"

It is an unwelcome sign of the times that Bill Wattenburg's Policy Forum "Fluorescent barriers to infiltration" appeared in *Science* (26 Aug., p. 1184), instead of in a military ordnance journal. Wattenburg proposes to block illegal immigration across the U.S.-Mexico border by aerial dusting with fluorescent chemicals, thereby tagging would-be "infiltrators" into San Diego. The danger in such a scheme is less in its dubious practical outcome than in its invitation to scientists to collaborate with xenophobia. Those of us who find human tagging distasteful, whether with fluorescent dyes or yellow stars, must question his premises.

Immigrants, legal or otherwise, have long been a convenient scapegoat for troubled economies. California's fiscal crisis stems from long-term decline in manufacturing, politically expedient tax cuts, and an overheated real estate market. The widespread belief, echoed by Wattenburg, that illegal immigrants are a drain on the economy and cause unemployment among U.S. workers has been effectively challenged by demographers. Politicians from David Duke to California Governor Pete Wilson obscure these realities by targeting undocumented workers, invariably those with dark skin. One product of this movement, the "Save Our State" proposition on the November ballot, would deny schooling and basic medical care to California's undocumented immigrants.

Experience suggests that high-tech gadgets are no match for desperate and determined people. During the Vietnam War, the "Jason" group of elite scientists arranged for 20,000 sensors of various types to be dropped on the Ho Chi Minh Trail to interdict Northern "infiltration." This "McNamara Line" was notoriously ineffective; reportedly, the North Vietnamese decoyed "people sniffers" by hanging bags of urine in the trees. We can expect similar resourcefulness from Mexican immigrants, who after all are not criminals, but impoverished workers seeking a better life for their children. The real impact of Wattenburg's proposal would be to lend credibility to anti-immigrant hysteria, at present the leading edge of "respectable" racism in this country.

Miriam Golomb

Division of Biological Sciences,  
University of Missouri,  
Columbia, MO 65211, USA

## Environmental Estrogens

The Environmental Protection Agency (EPA) was pleased to read "Environmental estrogens stir debate" by Richard Stone (News & Comment, 15 July, p. 308), where it was stated that in "the debate over hormone-modulating pollutants," EPA has increased its emphasis "on the noncancer effects of the chemicals it regulates." This approach is characterized as "a fresh concern for EPA, which in the past has crafted regulations based mainly on chemical carcinogenicity." While EPA has indeed often emphasized chemical carcinogenicity, noncancer health effects are also considered in most of EPA's regulatory actions, and some regulations are based solely on effects other than cancer.

All of the statutes under which EPA regulates provide authority to regulate for noncancer health effects. For example, the Clean Air Act designates six criteria pollutants (lead, particulate matter, ozone, nitrogen oxides, sulfur oxides, and carbon monoxide). Under this act, EPA must set a National Ambient Air Quality Standard (NAAQS) for each criteria pollutant for the entire United States "which in the judgment of [EPA], based on such criteria and allowing an adequate margin of safety, [is] requisite to protect the public health" (1).

The NAAQSs are based on a range of observed health effects which include respiratory effects, cognitive and neurobehavioral effects, reproductive effects, and death. None of the ambient air quality standards are based on carcinogenicity. In addition, the Clean Air Act lists 189 hazardous air pollutants that are subject to National Emission Standards for Hazardous Air Pollutants. A large proportion of these pollutants are not considered to be possible human carcinogens and are instead regulated on the basis of noncancer effects.

In addition, health effects testing authorities under the Toxic Substances Control Act and the Federal Insecticide, Fungicide and Rodenticide Act require testing of industrial chemicals and pesticides for multiple health endpoints, including mutagenesis, teratogenesis, behavioral disorders, and carcinogenesis. EPA uses this and other information in its ongoing evaluation of noncancer toxicity and regularly sets reference doses (RfDs), which are threshold levels of safe exposure for noncancer effects. These are routinely used in regulatory decisions.